
Chapter 9 — DPNSS1/DASS2 Implementation

Overview

This chapter provides installation instructions for DPNSS1 or DASS2. Hardware installation for DPNSS1/DASS2 is the same as for 2 Mb PRI installation found in Chapter 7. Make sure switch SW1 on the 2 Mb PRI card is set for DPNSS1 mode of operation.

DPNSS1/DASS2 Software programming

Use the following Overlay sequence to configure DPNSS1/DASS2

Step	Overlay	Action
1	17	DDCS loop & D-channel
2	74	Manipulating data blocks
3	15	Customer data block
4	16	Route data block
5	14	Trunk data block
6	73	Define clock controller parameters.
7	75	Bring loop into service

Step 1: Use LD 17 to configure the DPNSS1/DASS2 signaling link (DDSL) and PRI card number (DDCS).

Prompt	Response	Comment
req	chg	
type	cfn	
ADAN		
USR		
IFC		
DPNS	YES	Default is NO
DCHI	0-15	D-channel Port number This prompt is only given if DPNS is YES.
CDNO	1-9	DCHI card number
PORT	1	ESDI port number. On the 2 Mb PRI card, port number is always 1.
...		
parm	yes	Only required when making changes to buffers
...		
DTIB	35-1000	Size of IDA trunk input buffers for system (determined according to traffic)
DTOB	4-100	Size of IDA trunk output buffers per DTSL (determined according to traffic)
...		
cequ	yes	Change to CE parameters
...		
DDCS	1-9	Loop number for NT DPNSS1/DASS2 hardware. Enter multiples separated with a space.

The system must be initialized to invoke changes made to DTIB and DTOB. The previous prompts already exist. The sequence outlined in the previous table is used to configure the DDCS loop used either for either DPNSS1 or DASS2.

Step 2: Use overlay 74 to set protocols for the DPNSS1/DASS2 link.

Prompt	Response	Comment
REQ	NEW	
TYPE	DDSL	DPNSS1 link
DDSL	0-9	NT hardware
SIGL	DA	DPNSS1/DASS2 signaling
DDCS	1-9	PRI card number used for the DPNSS1/DASS2 link
PRIV	(YES)/NO	Enter YES for a private link (i.e. DPNSS1 to another PBX). Enter NO for a link to the public exchange (DASS2).
SIDE	(AET)/BNT	A or B end of DPNSS1 link. DASS2 defaults to B.
FLOW CNTL	YES/(NO)	Change flow control parameters. Prompted for DASS2 links only. Note: Must be set to NO if user to user or Tie line signaling are not used.
BRST PARM	0/4/8/16/32	Enter the flow control burst parameter set on the public network. Prompted only if FLOW CNTL =YES. See Note 2 below for more information.
REPL PARM	1/2/4/8	Enter the flow control replenishment parameter set on the public network. This is only prompted if FLOW CNTL =YES.

Prompt	Response	Comment
CNTL	YES/(NO)	Enter YES to receive the next two prompts.
ALRM	TBF PP MM CC FAE PP MM CC HER PP MM CC TSF PP MM CC AIS PP MM CC LOI PP MM CC DAI PP MM CC	Enter the desired persistence time (PP), monitor time (MM), and repeat count threshold (CC) for one of the seven types of alarms. The alarm condition thresholds are shown below.

Alarm Mnemonic	PP	MM	CC
TBF	0-15 secs (5)	0-24 hrs (0)	0-15 (1)
FAE	0-15 secs (2)	0-24 hrs (1)	0-15 (4)
HER	0-15 mins (1)	0-24 hrs (1)	0-15 (10)
TSF	0-15 secs (0)	0-24 hrs (0)	0-15 (0)
AIS	0-15 mins (1)	0-24 hrs (1)	0-15 (4)
LOI	0-15 secs (0)	0-24 hrs (0)	0-15 (0)
DAI	1-15 mins (1)	0-24 hrs (1)	0-15 (5)
CNTR	CRT, TMT, SCT 0- 255	Only prompted if CNTL=YES. Enter the desired threshold for one of the three counters in the range 0-254. If 255 is entered, the threshold is set to infinity. The defaults are: CRT (channel reset threshold) 120 TMT (test message threshold) 50 SCT (stop count threshold) 20	

A DPNSS1 link must have one end set to AET and the other end set to BNT.

Flow control is used to control the number of messages that are sent across a DASS2 link when using user to user or Tie line signaling features.

N = the number of messages that can be sent

X = the value of BRST PARM

Y = the value of REPL PARM

On call set up, $N = X$.

On every message sent, $N = N - 1$

Every 10 seconds, $N = N + Y$

N can never be greater than X

X must be equal to or greater than Y

If $N = 0$, no messages can be sent.

Step 3: Use LD 15 to define a DPNSS1/DASS2 customer.

Prompt	Response	Comment
REQ	NEW,CHG	
TYPE	CDB NET_DATA	Customer Data Block Release 21 gate opener
CUST	0-31	Customer number
LSC	dddd	For DPNSS1, enter the location number that identifies this PBX.
TIDM	YES/(NO)	Used for DPNSS1/DASS2 only. Enter YES if the Trunk Group reference number of a Trunk Identity is meaningful (as part of the CDP DN). Enter NO if the PBX reference number is to be displayed without the Trunk Group Reference Number.
DASC	dddd	Enter the access code that is to be placed on displays before OLI and TLIs received from the DASS2 trunk. This may be any one to four digits. Entering the attendant's DN will remove an existing value. The value also defaults to nothing if <CR> is entered.

Step 4: Use LD 16 to initialize the routes being used.

Prompt	Response	Comment
REQ	NEW, CHG	
TYPE	RDB	Route Data Block
CUST	0-31	Customer number
ROUT	XXX	Route number
TKTP	IDA	Trunk type = IDA (Integrated Digital Access)
SIGL	DPN DAS	Level 3 signaling: enter DPN for DPNSS1 signaling, or DAS for DASS2 signaling.
...		
ICOG	IAO ICT OGT	Incoming and Outgoing trunk Incoming trunk Outgoing trunk
ACOD	XXXX	Access code for direct access to the route. The ACOD has to be set, but after the set-up of a network numbering scheme it is only used for test access.

Step 5: Use LD 14 to initialize the channels within the routes.

Prompt	Response	Comment
REQ	NEW, CHG	
TYPE	RDC VDC	Real Digital Channel Virtual Digital Channel (DPNSS1 only)
TN	Ill ch	Loop and channel number for first trunk For DNPSS/DASS2, loop is 1-9 and channel is 1-15 or 17-31.
DDSL	0-15	DASS2/DPNSS1 D-channel number. Only prompted for NT hardware.
SIGL	DPN DAS	DPNSS1 channel DASS2 channel
CUST	0-31	Customer number
RTMB	XX YY	Route and member number
INC	(YES)/NO	If YES, channel numbers will be associated with members starting at the TN, both channel and member numbers increasing. If NO, member numbers decrease as channel numbers increase.
PRI0	(XHP) YLP	High priority on channel seizure Low priority on channel seizure

Note: On DPNSS1 links only, the high/low priority must be different at each end. Virtual channels for DPNSS1 use the same TNs as real channels.

Step 6: Use LD 73 to set clock references for the loop.

Prompt	Response	Description
REQ	CHG	
TYPE	PRI2	2 Mb PRI
FEAT	SYTI	Change the switch timers and counters for PRI2. There is only one such block per switch.
CLKN	1-9	Card slot number of the NTAK79 circuit card which supports the active Clock Controller
PREF	1-9	Primary reference source for clock controller. Enter the PRI card number of the NTAK79 PRI card which supports the active Clock Controller This is the PRI E1 span which the clock controller will use as it's primary source to synchronize (to track) the system network clock. A carriage return <CR> here signifies the system will operate in free-run (non-tracking). PREF should only be removed if the system is a master for clock synchronization.
LPTI		
SYTI		
— Continued —		

Free-run is used when this Meridian PBX serves as the clock source master for the private network. See the “*Network clocking*” chapter in this guide for more details on clocking.

Step 6: (continued)

Prompt	Response	Description
SREF	1-9	Secondary reference source for clock controller-- prompted only if primary source is not free-run. Enter the PRI card number of the DTI/PRI card which will be used as the secondary clock reference. This is the PRI which the clock controller will use as it's secondary source to synchronize (to track) the system network clock. Only used when unable to track on the primary source.
CCGD	0-(15)-1440	CC Free Run Guard Time.
CCAR	0-(15)	Clock Controller Audit Rate. Enter the time in minutes between normal CC audits.
EFCS	(NO), YES	Enable Fast Clock Switching Note: EREF option in LD 60 must be chosen to enable this prompt.

Threshold times may be entered in milliseconds (X=T), seconds (X=S), minutes (X=M) or hours (X=H). For milliseconds, nn is multiples of 20 ms, in the range 1 to 5000 (effective time range of 20 to 5000 ms). For seconds, nn is in increments of seconds, in the range 1 to 240. For minutes, nn is in increments of minutes, in the range 1 to 240. For hours, nn is in hour increments, in the range 1 to 24. This is the same as for the existing ISDN PRI feature.

Step 7: Use LD 75 to bring the link into service:

- 1** Enable the DDCS loop (ENL DDCS cc)
- 2** Enable the DCHI link (ENL DDSL n). This puts the DCHI into the ENBL IDLE state.
- 3** Start the DCHI link (STRT n). This makes the DCHI go from ENBL STARTING to ENBL ACTIVE.

Both ends of the link should be started within 5 minutes of each other.